

In the claims:

1-58 (cancelled)

64 (cancelled)

65. (new) A method of producing an addressable complex carbohydrate library, the method comprising the steps of:

- (a) providing an array having a plurality of addressable locations; and
- (b) enzymatically synthesizing a complex carbohydrate structure on each of said plurality of addressable locations of said array using naturally occurring monosaccharides units, thereby generating the addressable complex carbohydrate library having a plurality of complex carbohydrate structures each defined by said addressable location thereof on said array and each being composed of at least 2 and no more than 20 of said naturally occurring monosaccharides units.

66. (new) The method of claim 65, wherein each of said plurality of complex carbohydrate structures is attached to said array via a linker which includes at least one ethylenglycol derivative, at least two cyanuric chloride derivatives and an anilino group.

67. (new) The method of claim 66, wherein said linker includes three ethylenglycol derivatives, four cyanuric chloride derivatives and an anilino group.

68. (new) The method of claim 65, wherein at least one complex carbohydrate structure of said plurality of complex carbohydrate structures is a branched complex carbohydrate having a single structure defined by said addressable location thereof on said array.

69. (new) The method of claim 65, wherein step (b) is effected by parallel enzymatic synthesis of said plurality of complex carbohydrate structures.

70. (new) A method of producing an addressable complex carbohydrate library, the method comprising the steps of:

3

- (a) providing an array having a plurality of addressable locations;
- (b) attaching to each of said plurality of addressable locations a linker including at least one ethylenglycol derivative, at least two cyanuric chloride derivatives and an anilino group
- (c) enzymatically synthesizing a complex carbohydrate structure on said linker in each of said plurality of addressable locations of said array using naturally occurring monosaccharides units thereby generating the addressable complex carbohydrate library having a plurality of complex carbohydrate structures each attached to said array via said linker and each being composed of at least 2 and no more than 20 of said naturally occurring monosaccharides units.

71. (new) The method of claim 70, wherein each of said plurality of complex carbohydrate structures is defined by said addressable location thereof on said array.

72. (new) The method of claim 70, wherein said linker includes three ethylenglycol derivatives, four cyanuric chloride derivatives and an anilino group.

73. (new) The method of claim 70, wherein at least one complex carbohydrate structure of said plurality of complex carbohydrate structures is a branched complex carbohydrate having a single structure defined by said addressable location thereof on said array.

74. (new) The method of claim 70, wherein step (c) is effected by parallel enzymatic synthesis of said plurality of complex carbohydrate structures.